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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CHAMPAGNE, DONALD

ART UNIT	PAPER NUMBER
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3622

DATE MAILED: 03/19/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application N .

09/850,263

Applicant(s)

JACOBI ET AL.

Examiner

Donald L. Champagne

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 33-60 is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-28 and 30-32 is/are rejected.
- 7) ☒ Claim(s) 13 and 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed with an amendment on 6 January 2003 have been fully considered but they are not persuasive. The arguments are discussed at para. 7 and 8 below.

### *Claim Objections*

2. Claims 13 and 29 are objected to under 37 CFR 1.75 as respectively being substantial duplicates of claims 55 and 58. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

### *Claim Rejections - 35 USC § 102 and 35 USC § 103*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1, 2, 5, 7-9, 14, 15, 17, 18, 21, 23-25, 30 and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Whiteis.
6. Whiteis teaches (independent claims 1 and 17) a method and system for recommending items to users from a database of items, the method comprising: providing a table (*LINKS table 301*) that maps items from the database to respective sets of similar items, wherein the table includes values (*Link Weight 304*) that indicate degrees of similarity between specific items, said values reflecting an automated analysis of historical data (col. 2 lines 2-3) indicating item interests of each of a plurality of users (col. 3 lines 43-51); and identifying multiple items selected by the target user without requiring the target user to explicitly rate items (col. 3 lines 14-15 and 39-42); and selecting similar items (*Result Item 402*) from the table to recommend to the target user such that a determination of whether to recommend a particular similar item takes into consideration a degree to which that similar item is similar to each of the multiple items selected by the target user (the *LinksTo Weight 353*), as indicated by the table (col. 3 lines 52-64).
7. Applicant argues (Remarks, p. 4) that Whiteis does not teach or suggest identifying multiple items selected by the target user "without requiring the target user to explicitly rate items or explicitly create an input list of items". The reference does not teach *rating* items, which always has the connotation of quantification or at least ranking (Merriam-Webster's Collegiate Dictionary).
8. The reference does require that "the user chooses the items he knows he likes from a master list of items". Applicant argues that this constitutes explicitly creating an input list of items, which is expressly precluded by amended claims 1 and 17. But this line of reasoning is not consistent with the specification. The disclosure distinguishes between "explicit" and "implicit" development of lists only by example at p. 12 lines 12-14. There it is disclosed that items added to a shopping cart constitute an implicit, not an explicit, expression of interest. That is a specie to the reference's genus (para. 12 below). Furthermore, dependent claims 5 and 21 are also species of a reference teaching (para. 10 below). Hence, by the application's examples of what is consistent with claims 1 and 17, the reference selections are implicit, not explicit.

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9. The reference also teaches at the citations given above claims 2 and 18; 7 and 23 (inherently, from the similarity definition of *Link Weight 304*); 8, 9, 24 and 25; and 15 and 31 (inherently, because all content is downloadable).
10. The reference also teaches claims 5 and 21 (col. 2 lines 23-26),
11. Claims 3, 4, 6, 10-12, 16, 19, 20, 22, 26-28 and 32 are rejected under 35 U.S.C. 103(a) as being obvious over Whiteis.
12. Whiteis does not teach (claims 3, 4, 10, 19, 20 and 26) an electronic shopping cart. The reference does teach the genus "items that the user chooses, knows he likes, and may want to purchase" (col. 3 lines 14-15 and col. 2 lines 23-26), which would strongly suggest the specie "electronic shopping cart" to one of ordinary skill in the art, at the time of the invention. The reference also does not teach (claims 6 and 22) that the items were selected by the target user through online browsing. Because virtually all shopping entails some browsing, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to add the selection of items by online browsing to the teaching of Whiteis.
13. Whiteis does not teach (claims 11 and 27) not recommending items already purchased. Because there would be no point in recommending items already purchased, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to not recommending items already purchased.
14. Whiteis does not teach (claims 12 and 28) further determining similarity by content analysis of item descriptions. Because content analysis is well known for similarity determination and could provide marginal advantages, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to further determining similarity by content analysis of item descriptions.
15. Whiteis does not teach (claims 16 and 32) that the table is stored as a B-tree data structure. Because it is a well-known structure providing efficient lookup, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to store the table as a B-tree data structure.

***Allowable Subject Matter***

16. Claims 33-60 are allowed.

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17. The following is an examiner's statement of reasons for allowance.
18. The closest prior art, Whiteis, does not teach or suggest generating recommendations in real time (independent claims 55 and 58). Bieganski (col. 7 lines 14-15) teaches generating recommendations in real time. However, it would not have been obvious to one of ordinary skill in the art, at the time of the invention, to add the teachings of Bieganski to those of Whiteis.
19. The desirability of real-time recommendations was certainly obvious at the time of the invention. Whiteis, for example (col. 1 line 55), criticizes the prior art for being incapable of offering "automatic, point-of-sale recommendations". Yet Whiteis is silent on whether or not its invention can deliver results in real time. Furthermore, the examples in Whiteis do not mention point-of-sale recommendations. These omissions could only suggest to one of ordinary skill in the computerized marketing art that the Whiteis invention was probably not capable of delivering real time results.
20. Bieganski differs fundamentally from Whiteis. Bieganski builds and maintains a user profile for each user (col. 6 lines 12-13), and develops a recommendation for a user by first developing a community of users closest to the subject user. Whiteis develops recommendations by correlating the subject user's selections to the aggregate preferences of all previous users. A combination of references can be obvious only when there is a reasonable expectation of success (MPEP § 2143.02). One of ordinary skill in the art would not have a reasonable expectation, at the time of the invention, that the teachings of Bieganski could be used to make the Whiteis invention generate recommendations in real time.
21. For independent claims 33 and 48, the closest prior art are applicants' US patents 6,266,649 B1 and 6,317,722 B1, over which an obviousness double patenting rejection was made and a satisfactory terminal disclaimer has been filed.
22. For independent claim 33, the closest prior art by another is Whiteis. Whiteis does not teach or suggest user-specific histories. Stein et al. teaches user-specific histories (col. 6 lines 3-5), but it would not have been obvious to add the teachings of Stein et al. to those of Whiteis. Each of the references uses different statistical bases with strengths and weaknesses. The reliance on user-specific histories of Stein et al. would produce better recommendations for a given user when there is pertinent data, but would be deficient when

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there is little or no pertinent data. Conversely, the reliance on aggregate data of Whiteis is capable of producing recommendations for any user, but the recommendations would tend to be inferior to those produced by Stein et al. for any given user. One of ordinary skill in the art would not have a reasonable expectation, at the time of the invention, that the teachings of Stein et al. could be used to improve the Whiteis invention.

23. The closest prior art by another is also Whiteis for independent claim 48. Whiteis does not teach or suggest that the additional item is selected because it is similar to *more than one* of the plurality of items selected by the user. This is a logical extension of Whiteis, which teaches that the item is selected because it is similar to *one* of the plurality of items. However, as with the case discussed in para. 22 above, this extension entails tradeoffs. One of ordinary skill in the art would not have a reasonable expectation that it would be worth the cost.
24. The closest foreign patent prior art is Lashkari et al., EP 0 751 471 A1. It does not teach or suggest: a table including values indicating the similarity or relatedness between specific items (independent claims 1 and 17); indicating a frequency with which each pair of items occurs within a same user-specific history (independent claim 33); and recommending an item based on the similarity of that item to more than one of the plurality of items in an electronic shopping cart (claim 48). In short, the instant invention recommends an item based on its similarity to other items. Conversely, the reference recommends an item to a user based on that user's similarity to other users.
25. The closest non-patent prior art is Faloutsos and Oard, "A survey of information retrieval and filtering methods", which teaches recommending an item (a document) based on its similarity to other items. (This document is undated, but refers to a 1983 text for the pertinent material.) However, the reference does not teach or suggest recommending an item based on its similarity/relatedness to each of multiple items selected by a user (independent claims 1 and 17); a table comprising the frequency with which each pair of items in the table occurs within a same user-specific history (independent claim 33); and recommending an item based on the similarity of that item to more than one of the plurality of items in an electronic shopping cart (claim 48).
26. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the

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issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

**Conclusion**

27. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
28. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.
29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L Champagne whose telephone number is 703-308-3331. The examiner can normally be reached from 6:30 AM to 5 PM ET, Monday to Thursday. The examiner can also be contacted by e-mail at [donald.champagne@uspto.gov](mailto:donald.champagne@uspto.gov), and *informal* fax communications may be sent directly to the examiner at 703-746-5536.
30. The examiner's supervisor, Eric Stamber, can be reached on 703-305-8469. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular official communications and 703-872-9327 for After Final official communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5771.
31. **AFTER FINAL PRACTICE** – Consistent with MPEP § 706.07(f) and 713.09, prosecution generally ends with the final rejection. Examiner will grant an interview after final only when applicant presents compelling evidence that "disposal or clarification for appeal may be accomplished with only nominal further consideration" (MPEP § 713.09). The burden is on



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applicant to demonstrate this requirement, preferably in no more than 25 words.

Amendments are entered after final only when the amendments will clearly simplify issues, or put the case into condition for allowance, clearly and without additional search or more than nominal consideration.

32. An amendment after final to cancel all but claims 33-60 will be accepted. Indeed, the examiner will be pleased to do so by examiner's amendment upon receiving oral authorization from the attorney.
33. Applicant may have any other after final arguments considered and amendments entered by filing a CPA or RCE as appropriate.
34. **ABANDONMENT** – If examiner cannot by telephone verify applicant's intent to continue prosecution, the application is subject to abandonment six months after mailing of the last Office action. The agent, attorney or applicant point of contact is responsible for assuring that the Office has their telephone number. Agents and attorneys may verify their registration information including telephone number at the Office's web site, [www.uspto.gov](http://www.uspto.gov). At the top of the home page, click on Site Index. Then click on Agent & Attorney Roster in the alphabetic list, and search for your registration by your name or number.



Donald L. Champagne  
Examiner  
Art Unit 3622

15 March 2003